Wilberforce Sixth Form College: Utilising server and desktop virtualisation to widen participation

Summary

Due in part to the economic standing of the local area, Wilberforce 6th Form College identified the need to provide a more equal opportunity for access to college systems in order to improve learning. They have virtualised their servers and desktop and have signed up to Live at Edu to provide additional collaborative and communication tools online. They have developed their virtual and physical infrastructure to support increased use of student and staff owned mobile devices as well as moving to thin client machines over full desktop computers within the college.

About Wilberforce College

Wilberforce 6th Form College is a widening participation organisation that has been teaching and inspiring students from Hull and the East Riding for over 20 years. Around half of their provision is BTEC so they provide a ‘mini FE college’ experience. Their 1,500 students get excellent results that help them win top university places or go on to get top jobs. As Hull’s number one state college for student progress, Wilberforce is the first choice for Year 11 pupils in this area.

The challenge

Wilberforce 6th Form College is located in an area of deprivation. The underlying aim of this project was to address the issues of low self-esteem among staff and students, improve access to IT and to increase the use of technologies and the Virtual Learning Environment (VLE) through the use of mobile technologies.
Technological issues included differentiated staff and student access to software. The economic context of the area meant that the technology individuals had access to was varied and often outdated. This impacted on the programmes that could be used even if the user could afford the software in the first instance. The area is served in the main by a KC (Karoo) Broadband Connection, which has both positive impacts and negative challenges. Therefore it was important to make sure that individuals could use mobile technologies more effectively.

The activity

The college decided that Shirley-Ann Brookes-Mills, a non-IT specialist, should lead the development of e-learning so that the focus remained on improving teaching and learning. Shirley-Ann has worked with Mark Daley (IT Services team) to provide a good balance of technical and learning knowledge and help the organisation move forward in this area. This has been aided by the proactive attitude of the IT Services team’s willingness to support teaching and learning in the college. Mark said; “If we can make it happen we will, so that the users are happy.”

In 2011 the college moved from traditional physical servers to a virtual setup via a Virtual Local Area Network (VLAN) restructure. This provided the foundation needed to deliver a virtual desktop solution. The college researched several options relating to initial cost and return on investment and decided on Phoenix Software to collaborate with. Virtualisation was chosen due to long term benefits outweighing the initial cost.

The Jisc RSC Yorkshire & Humber brought a Roadshow to the college and showcased a range of available technologies and how they could be used to support teaching and learning. They focused on mobile technologies, which received a great response from teachers. Consequently additional equipment was purchased after the Jisc RSC YH loaned them a variety of technologies. This received a positive reaction and it is hoped it will result in enthused teams and greater engagement with the new technologies from staff and students alike. Shirley-Ann commented that, “the new processes will be supported from induction onwards.”

A new course was implemented on the VLE to help students work at their own pace and learn about how the new infrastructure works. Systems were synchronised allowing students to use their own technology to access their learning.
Mark Daley added; “the course has been set up to be icon driven, based on different possible devices individuals may have. By following the steps provided it only takes 20-40 seconds to sync.”

During the summer of 2012 Live at Edu was set up. This enabled all students to have an account with an affiliated email address, access to cloud storage and use of online Microsoft Office programmes to increase collaborative opportunities. Over the holidays the virtual desktop solution was installed, including a centralised calendar for key college events. New thin client machines were also purchased. Consequently virtual changes resulted in a physical upgrade to college buildings. These were redeveloped into a student area in preparation for the expected increase in use of mobile technologies.

The outcomes

The key outcomes include:

- Virtual Servers improving efficiency
- Desktop Virtualisation allowing equal access to software and learning resources regardless of device as the solution works on Windows, Mac, Tablet, iPad and Smartphones via a broadband or 3G connection
- Reduced risk of students accessing illegal copies of software
- Enhanced student induction process and online resources
- Additional physical student spaces within the college to support the use of additional mobile devices for learning
- Increased use of mobile technologies

The impact

While the solution will only be fully rolled out in 2012/13, the following impacts are expected:

- Simpler access to all college communication and learning resources though a single sign in point – to the virtual desktop
- Easier support of a smaller suite of programmes (running the same version)
- Equality of access – widening participation
- Improved communication and collaboration – anytime access to emails and learning tools
- Increased use of the VLE to facilitate learning
- Increased confidence with IT through the use of mobile technology
- Return on investment – need to replace hardware less frequently proving to be more cost effective
Principal, David Cooper, concluded:

“For me, the importance of virtual desktop is in removing yet another barrier to student participation. It means that whatever their personal circumstances, provided a student has access to the most basic desktop, then their technological resources are the best the college can provide.”

**The lessons learned**

Working with the IT Services team, specifically Mark Daley, has helped Shirley-Ann Brookes-Mills move eLearning forward in the college. One of the key factors to this success has been the attitude of the technical team to work in partnership with the teaching and learning departments promoting a ‘can-do’ attitude.

Mark Daley highlighted the following suggestions for other organisations thinking about installing a similar solution; “It is vitally important that time is spent choosing partners to work with, researching every stage; costs, return on investment, support and the end product, as well as following up references and ensuring potential issues are detected, which providers may not highlight. For us the best solution included acquiring a great deal of equipment, which was no means the cheapest option. Migrating existing mail into Live at Edu is a lot of work for minimum gain. If you have the choice run VMWare over IP (internet protocol) rather than RDP (remote desktop protocol) as it’s faster. I have discovered that Windows 7 thin client version is free so try to use that as your first choice as it is very quick to replicate across the server”.

Shirley-Ann concluded; “it is important to keep everyone informed about what is going on – especially where things are changing. By keeping people in the loop, being positive about any developments and providing examples of how the new solutions or technology could work for them creates a buzz. We have witnessed that – especially since the RSC Roadshow - and expect them to pass that enthusiasm on to their students when the new term starts.”

**Useful links**

- Wilberforce 6th Form College
- Phoenix Software
- Microsoft Live@Edu

[www.jiscrsc.ac.uk/case-studies](http://www.jiscrsc.ac.uk/case-studies)
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